



Product designation	Power contactor		
Product type designation	BF25		
Contact characteristics			
Number of poles	Nr.	3	
Rated insulation voltage U _i IEC/EN	V	690	
Rated impulse withstand voltage U _{imp}	kV	6	
Operational frequency	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current I _{th}	A	32	
Operational current I _e	AC-1 (≤40°C)	A	32
	AC-1 (≤55°C)	A	26
	AC-1 (≤70°C)	A	23
	AC-3 (≤440V ≤55°C)	A	25
	AC-4 (400V)	A	10
Rated operational power AC-3 (T≤55°C)	230V	kW	7
	400V	kW	12.5
	415V	kW	13.4
	440V	kW	13.4
	500V	kW	15
	690V	kW	11
Rated operational power AC-1 (T≤40°C)	230V	kW	12
	400V	kW	21
	500V	kW	26
	690V	kW	36
IEC max current I _e in DC1 with L/R ≤ 1ms with 1 poles in series	≤24V	A	20
	48V	A	18
	75V	A	18
	110V	A	6
	220V	A	–
IEC max current I _e in DC1 with L/R ≤ 1ms with 2 poles in series	≤24V	A	23
	48V	A	23
	75V	A	23
	110V	A	16
	220V	A	1
IEC max current I _e in DC1 with L/R ≤ 1ms with 3 poles in series	≤24V	A	23
	48V	A	23
	75V	A	23
	110V	A	18

	220V	A	12
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IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series	≤24V	A	15
	48V	A	13
	75V	A	13
	110V	A	2
	220V	A	–
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series	≤24V	A	18
	48V	A	18
	75V	A	16
	110V	A	10
	220V	A	2
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series	≤24V	A	22
	48V	A	22
	75V	A	18
	110V	A	15
	220V	A	8
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IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series	≤24V	A	–
	48V	A	–
	75V	A	–
	110V	A	–
	220V	A	–
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Short-time allowable current for 10s (IEC/EN60947-1)		A	200
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Protection fuse	gG (IEC)	A	50
	aM (IEC)	A	25
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Making capacity (RMS value)		A	250
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Breaking capacity at voltage	440V	A	200
	500V	A	184
	690V	A	102
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Resistance per pole (average value)		mΩ	2.5
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Power dissipation per pole (average value)	I _{th}	W	2.6
	AC-3	W	1.6
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Tightening torque for terminals	min	Nm	1.5
	max	Nm	1.8
	min	I _{bin}	1.1
	max	I _{bin}	1.5
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Tightening torque for coil terminal	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	0.8

		max	I _{bin}	0.74
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil	max		10
Flexible w/o lug conductor section		min	mm ²	1
		max	mm ²	6
Flexible c/w lug conductor section		min	mm ²	1
		max	mm ²	4
Flexible with insulated spade lug conductor section		min	mm ²	1
		max	mm ²	4
Power terminal protection according to IEC/EN 60529				IP20 when properly wired

Mechanical features

Operating position		normal allowable		Vertical plan ±30°
Fixing				Screw / DIN rail 35mm
Weight			g	500
Conductor section	AWG/kcmil conductor section	max		10

Auxiliary contact characteristics

Thermal current I _{th}		A		10
IEC/EN 60947-5-1 designation				A600 - P600
Operating current AC15		230V	A	3
		400V	A	1.9
		500V	A	1.4
Operating current DC12		110V	A	5.7
Operating current DC13		24V	A	5.7
		48V	A	2.9
		60V	A	2.3
		110V	A	1.25
		125V	A	1.1
		220V	A	0.55
		600V	A	0.2

Operations

Mechanical life		cycles		20000000
Electrical life		cycles		1200000

Safety related data

Performance level B10d according to EN/ISO 13489-1		rated load	cycles	1200000
		mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1				yes
EMC compatibility				yes

DC coil operating

DC rated control voltage		V	24
DC operating voltage			
pick-up	min	%Us	70
	max	%Us	125
drop-out	min	%Us	10
	max	%Us	40
Average coil consumption $\leq 20^{\circ}\text{C}$	in-rush	W	5.4
	holding	W	5.4

Max cycles frequency

Mechanical operation	cycles/h	3600
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Operating times

Average time for Us control				
in AC				
	Closing NO	min	ms	8
		max	ms	24
	Opening NO	min	ms	10
		max	ms	20
	Closing NC	min	ms	14
		max	ms	28
	Opening NC	min	ms	7
		max	ms	18
in DC				
	Closing NO	min	ms	54
		max	ms	66
	Opening NO	min	ms	14
		max	ms	17

UL technical data

Full-load current (FLA) for three-phase AC motor	at 480V	A	21
	at 600V	A	17

Yielded mechanical performance			
for single-phase AC motor	110/120V	HP	2
	230V	HP	3
for three-phase AC motor	200/208V	HP	7.5
	220/230V	HP	7.5
	460/480V	HP	15
	575/600V	HP	15

General USE			
Contactor	AC current	A	32
Auxiliary contacts	AC voltage	V	600
	AC current	A	10

	DC voltage	V	250
	DC current	A	1
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Short-circuit protection fuse, 600V High fault	Short circuit current	kA	100
	Fuse rating	A	60
	Fuse class		J
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Standard fault	Short circuit current	kA	5
	Fuse rating	A	100
Contact rating of auxiliary contacts according to UL			A600 - P600

Ambient conditions

Temperature

Operating temperature

min	°C	-50
max	°C	70

Storage temperature

min	°C	-60
max	°C	80

Max altitude

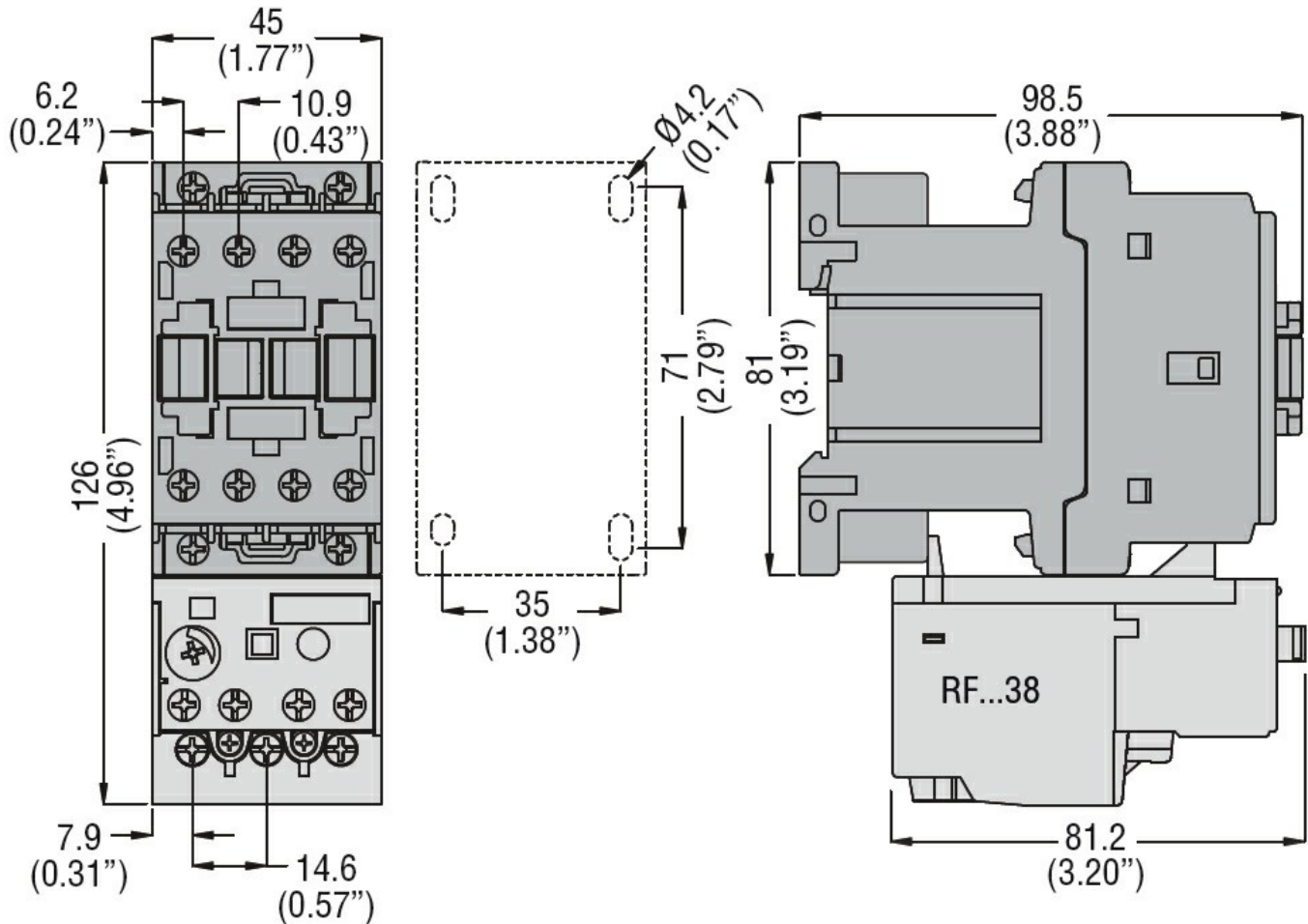
m	3000
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Resistance & Protection

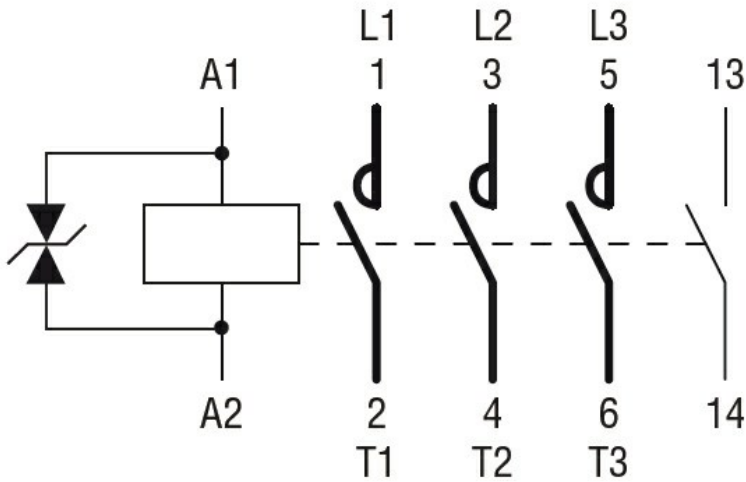
Pollution degree

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Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN/BS 60947-1

IEC/EN/BS 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
 Power contactor,
 AC switching